Cauchari Mineral Resource and Ore Reserve Update and Project Update

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BRISBANE, Sept. 24, 2023 - Allkem Ltd. (ASX|TSX: AKE) ("Allkem" or "the Company") is pleased to announce a project update to its wholly owned Cauchari lithium brine project located in Jujuy Province in Argentina. Allkem has reviewed and updated the project Mineral Resources and Ore Reserves, project cost and schedule estimates, and project economics from the October 2019 Technical Report ("previous study") released before Orocobre Limited acquired 100% of Advantage Lithium Corp. in April 2020.

HIGHLIGHTS

Financial Metrics

- 25,000 tonnes per annum of lithium carbonate production capacity
- Material ~200% increase in Pre-tax Net Present Value ("NPV") to US$2.52 billion from US$0.84 billion in the previous study at a 10% discount rate. The Post-tax NPV at 10% discount rate is US$1.37 billion.
- Cash operating margin stayed constant at ~85%, with the increased realised price projections being proportionally offset by increased operating costs. Operating costs increased from US$3,560 per tonne LCE to US$4,081 per tonne lithium carbonate equivalent ("LCE") due to material increases in the price of soda ash, lime, natural gas and employment costs since the previous study

Mineral Resource and Ore Reserve

- Total Mineral Resource Estimate of 5.95 million tonnes ("Mt") LCE, a 6% decrease from the previous estimate in 2019 due to slight changes in mining parameters
- Total Ore Reserve Estimate of 1.13 Mt LCE supporting a 30-year project life based on Ore Reserves only, a 11% increase from the previous statement due to a revised point of reference for Ore Reserve reporting of 'brine pumped to the evaporation ponds'

Project Cost and Schedule Update

- Increase in the development capital cost estimate ("CAPEX") from US$446 million in the previous study to US$659 million, for mechanical completion, representing a 48% increase
- Substantial mechanical completion, pre-commissioning and commissioning activities are expected by H1 CY27 with first production expected in H2 CY27 and ramp up expected to take 1 year

Managing Director and Chief Executive Officer, Martin Perez de Solay commented
"The updated study results clearly demonstrate the value of the Cauchari Project on a stand-alone basis. With the study update being based on the historic work performed by Advantage Lithium Corp. we do see substantial opportunities to integrate this asset into our Olaroz complex. These opportunities would likely reduce capital and operating costs and these are being explored as part of our Olaroz Stage 3 expansion studies."

PROJECT BACKGROUND

Allkem is developing the Cauchari Project ("the project") on the Cauchari Salar which is located in the Puna region, 230 kilometres west of the city of San Salvador de Jujuy in Jujuy Province of northern Argentina at an altitude of 3,900 metres (m) above sea level. The property is to the south of Olaroz near a paved Hwy that connects to the international border with Chile (80 km to the west) and the major mining centre of Calama and the ports of Antofagasta and Mejillones in northern Chile, both major ports for the export of mineral commodities and import of mining equipment. The Cauchari deposit lies within the "lithium triangle", an area encompassing Chile, Bolivia and Argentina that contains a significant portion of the world's estimated lithium resources (Figure 1).

Figure 1: Cauchari project location
https://www.globenewswire.com/NewsRoom/AttachmentNg/75f6a06e-d24a-4bff-a46b-a53136318557

The Cauchari tenements cover 28,906 ha and consist of 22 minas which were initially applied for on behalf of South American Salars ("SAS"). SAS is a joint venture company with the beneficial owners being Advantage Lithium ("AAL") with a 75% interest and La Frontera with a 25% stake. La Frontera and AAL are 100% owned by Allkem Limited. The Project is not known to be subject to any environmental liabilities.

The Project is a planned lithium brine mining and processing facility that will produce lithium carbonate. Allkem has reviewed and updated the project Mineral Resources and Ore Reserves, project cost and schedule estimates, and project economics from the previous technical report dated October 2019 released before Orocobre Limited acquired 100% of Advantage Lithium Corp. in April 2020. This project update of the Cauchari Mineral Resource and Ore Reserves indicate potential for a 25,000 tonne per annum ("tpa") lithium carbonate processing facility with a life expectancy of 30 years.

The wellfield, brine distribution, evaporation ponds, waste (wells and ponds) and process plant cost estimates are Association for the Advancement of Cost Engineering ("AACE") AACE Class 4 +30% / - 20% with no escalation of costs. Lithium production has not commenced at the Cauchari site, however an update to the pre-feasibility study ("PFS") has been completed for Cauchari.

GEOLOGY & MINERALISATION

Salar de Cauchari is a mixed style salar, with a halite nucleus in the centre of the Salar overlain with up to 50 m of fine grained (clay) sediments. The halite core is interbedded with clayey to silty and sandy layers. The Salar is surrounded by relative coarse grained alluvial and fluvial sediments. These fans demark the perimeter of the actual Salar visible in satellite images and at depth extend towards the centre of the Salar where they form the distal facies with an increase in sand and silt. At depth (between 300 m and 600 m) a deep sand unit has been intercepted in several core holes in the SE Sector of the Project area.

The brines from Salar de Cauchari are solutions nearly saturated in sodium chloride with an average concentration of total dissolved solids ("TDS") of 290 g/l. The average density is 1.19 g/cm3. Components present in the Cauchari brine are potassium, lithium, magnesium, calcium, chloride, sulphate, bicarbonate and boron.

MINERAL RESOURCE AND ORE RESERVE ESTIMATES

Brine Mineral Resource Estimate

Atacama Water was engaged to estimate the lithium Mineral Resources and Ore Reserves in brine for various areas within the Salar de Cauchari basin in accordance with the 2012 edition of the JORC code ("JORC 2012"). Although the JORC 2012 standards do not address lithium brines specifically in the guidance documents, Atacama Water followed the NI 43-101 guidelines for lithium brines set forth by the Canadian Institute of Mining, Metallurgy and Petroleum (CIM 2014) which Atacama Water considers complies with the intent of the JORC 2012 guidelines with respect to providing reliable and accurate information for the lithium brine deposit in the Salar de Cauchari.

A lithium cut-off grade of 300 mg/L was utilised based on a projected lithium carbonate price of US$20,000 per tonne over the entirety of the LOM. The total revised Mineral Resource estimate of 5.95 Mt LCE (detailed in Table 1) reflects a 5.6% total decrease to the prior Mineral Resource of 6.30 Mt LCE (Table 2). This decrease relates to the use of a cut-off grade in the estimation of mineral resources.

The different Mineral Resource categories were assigned based on available data and confidence in the interpolation and extrapolation possible given reasonable assumptions of both geologic and hydrogeologic conditions. Measured, Indicated and Inferred Mineral Resource; totalling 160.9 km^2, are displayed in Figure 2.

Figure 2: Location section of Measured, Indicated and Inferred Lithium Mineral Resources

https://www.globenewswire.com/NewsRoom/AttachmentNg/9141126e-a63f-415a-82dc-885cdd879155

Table 1: Cauchari Mineral Resource Estimate at August 2023

Category	Brine volume	Average Li
	m^3	*mg/l*
Measured	6.5×10^8	527
Indicated	1.1×10^9	452
Measured & Indicated	1.8×10^9	476
Inferred	6.0×10^8	473
Total	2.4×10^9	475

1. The Competent Person(s) for these Mineral Resources and Ore Reserves estimate is Atacama Water
2. Comparison of values may not add up due to rounding or the use of averaging methods
3. Lithium is converted to lithium carbonate (Li2CO3) with a conversion factor of 5.323
4. The cut-off grade used to report Cauchari Mineral Resources is 300 mg/l
5. Mineral Resources that are not Ore Reserves do not have demonstrated economic viability, there is no certainty

Table 2: Cauchari Mineral Resource Estimate at April 2019

Category	Brine volume	Average Li	In Situ Li	Li_2CO_3 Equivalent
	m^3	*mg/l*	*tonnes*	*Tonnes*
Measured	6.5×10^8	527	345,000	1,850,000
Indicated	1.2×10^9	452	550,000	2,950,000
Measured & Indicated	1.9×10^9	476	900,000	4,800,000
Inferred	6.0×10^8	473	280,000	1,500,000
Total	2.5×10^9	475	1,180,000	6,300,000

Note: The reader is cautioned that Mineral Resources are not Ore Reserves and do not have demonstrated economic viability. Values are inclusive of Ore Reserve estimates, and not "in addition to"

Additional information for the resource estimation can be found in the Annexures.

Brine Ore Reserve Estimate

Proved Reserves were derived from the Measured Resources in the NW wellfield area during the first seven years of production (with production in the NW extending for 9 years). Lithium Ore Reserves derived after Year 7 from the Measured and Indicated Mineral Resources in the NW and SE wellfield areas were categorized as Probable Reserves. Results of a separate model simulation to evaluate the potential effect of the proposed neighbouring LAC brine production (according to LAC Updated Feasibility Study of January 2020) showed that there is no material impact on the Cauchari Reserve Estimate. Table 3 shows the Ore Reserve Estimate for the Cauchari Project.

It is the opinion of the CP that the FEFLOW model provides a reasonable representation of the hydrogeological setting of the Project area and that the model is adequately calibrated to be an appropriate tool to estimate the Proved and Probable Reserves reported hereinafter. To the extent known by the CP, there are no known environmental, permitting, legal, title, taxation, socioeconomic, marketing, political or other relevant factors that could affect the Ore Reserve estimate which are not discussed in this Report.

The revised Ore Reserve Estimate of 1.13 Mt LCE supporting a 30-year project life based on Ore Reserves only, an 11% increase from the previous statement due to a revised point of reference for Ore Reserve reporting of 'brine pumped to the evaporation ponds.' Process efficiency factors were considered in the previous estimate, while the current reserve is reported from a point of reference of brine pumped to the evaporation ponds.

Table 3: Cauchari Project Reserve Estimate at 30 June 2023

Category	Year	Brine Vol (Mm^3)	Average Lithium Grade (mg/L)	Lithium (kt)	Li_2CO_3 Equivalent (kt)
Proved	1-7	76	571	43	231
Probable	8-30	347	485	169	897
Total	1-30	423	501	212	1,128

1. The Competent Person(s) for these Mineral Resources and Ore Reserves estimate is Atacama Water.
2. Comparison of values may not add up due to rounding or the use of averaging methods.
3. Lithium is converted to lithium carbonate (Li2CO3) with a conversion factor of 5.323.
4. The cut-off grade used to report Cauchari Ore Reserves is 300 mg/l.
5. Mineral Resources that are not Ore Reserves do not have demonstrated economic viability, there is no certainty that any or all of the Mineral Resources can be converted into Ore Reserves after application of the modifying factors.
6. The Lithium Ore Reserve Estimate represents the lithium contained in the brine produced by the wellfields as input to the evaporation ponds. Brine production initiates in Year 1 from wells located in the NW Sector. In Year 9, brine production switches across to the SE Sector of the Project.
7. Approximately 25% of M+I Mineral Resources are converted to Total Ore Reserves.
8. Potential environmental effects of pumping have not been comprehensively analysed at the PFS stage. Additional evaluation of potential environmental effects will be done as part of the next stage of evaluation.
9. Additional hydrogeological test work will be required in the next stage of evaluation to adequately verify the quantification of hydraulic parameters in the Archibarca fan area and in the Lower Sand unit as indicated by the sensitivity analysis carried out on the model results. Ore Reserves are derived from and included within the M&I Mineral Resources in the Mineral Resource Table 1 above.

Indicated Mineral Resources of 894,000t LCE contained in the West Fan Unit are not included in this PFS production profile. There is a reasonable prospect that through additional hydrogeological test work Inferred Resources in the Lower Sand Units will be converted to M+I Mineral Resources.

BRINE EXTRACTION AND PROCESSING

Brine Extraction

Lithium bearing brine hosted in pore spaces within sediments in the salar will be extracted by pumping using a series of production wells to pump brine to evaporation ponds for its concentration. Extraction of brine does not require open pit or underground mining.

Based on the results of the pumping tests carried out for the Project, the brine extraction from Salar de Cauchari will take place by installing and operating two conventional production wellfields. The brine production will take place initially from a wellfield in the NW Sector immediately adjacent to the evaporation ponds on the Archibarca Fan from Year 1 through to Year 9. After Year 9 it is planned that the brine production will shift to a second wellfield constructed in the SE Sector (Figure 3).

Figure 3: Location map of NW and SE wellfield
https://www.globenewswire.com/NewsRoom/AttachmentNg/0842b0b5-62ae-4c3a-a8f8-bdb3040aedce

The combined production from the NW wellfield will ramp up from 170 l/s in Year 1 to approximately 460 l/s in Year 8. It is expected that pumping rates of individual wells in the NW wellfield will vary between 20 l/s and 30 l/s so that up to 22 wells may be required to meet the overall brine production requirements. The NW production wells are located on the main access roads between the evaporation ponds and will be drilled and completed to a depth of approximately 360 m in the lower brine aquifer of the Archibarca fan. The upper part of the production wells through the Archibarca fresh to brackish water aquifer will be entirely cemented and sealed to an approximate depth of 140 m to avoid any freshwater inflow into the wells. Below 140 m depth the wells will be completed with 12-inch diameter production casing. The wells will be equipped with submersible pumping equipment. It is planned that the NW production wells will discharge immediately into evaporation ponds No 1 and No 2 without intermediate boosting or storage requirements.

As a general overview of the process, the brine that feeds the lithium carbonate (Li_2CO_3) Plant is obtained from the two brine production wellfields.

The brine is pumped to the evaporation ponds, designed to crystallize mainly halite and some glauber salt, glaserite, silvite and borate salts. At certain points slaked lime is added to the brine, which removes a large part of the Magnesium (Mg) as magnesium hydroxide. The Calcium (Ca) is precipitated as gypsum, thus also removing dissolved sulphate (SO_4). After the evaporation ponds, the brine is fed to the Li_2CO_3 plant, where, through a series of purification processes, solid lithium carbonate is obtained, to be shipped according to the final customer requirements. A general process flow diagram is shown in Figure 4.

Figure 4: Process Overview Diagram
https://www.globenewswire.com/NewsRoom/AttachmentNg/5b58d7ac-8e71-45c1-990b-fbda65e579ca

The brine is concentrated until it reaches a Li concentration of 7,000 mg/l. An overall evaporation ponds and lithium carbonate plant recovery of 66% for lithium is modelled based on industrial operational results. A more detailed description of the process for both the evaporation ponds and the lithium carbonate plant are presented below.

The Cauchari Project will include the design and installation of production wells, evaporation ponds and a processing plant to obtain 25,000 tpa of battery grade lithium carbonate (Li_2CO_3). A general block diagram of the process is shown in Figure 5.

Figure 5: General Block Diagram for the Process
https://www.globenewswire.com/NewsRoom/AttachmentNg/425fad04-0d97-45f7-97d6-9ace3e28d521

The lithium carbonate plant is a chemical facility that receives the concentrated brine from the evaporation ponds and, through a series of chemical processes, generates lithium carbonate battery grade in a solid form. All impurities that are still left in the brine after the evaporation ponds are removed in the lithium carbonate plant, through specific stages described below.

The first stage of the lithium carbonate plant is the calcium and magnesium removal stage. A solution of soda ash and slaked lime are added to the concentrated brine from the evaporation ponds in an agitated reactor. Mg and Ca will precipitate as magnesium hydroxide ($Mg(OH)_2$) and calcium carbonate ($CaCO_3$). The slurry is then filtered, and the Mg and Ca free brine is sent to the next stage. The solids obtained from the filtering stage are re-pulped and sent directly to the first sludge pond.

The lithium rich brine is fed to an ion exchange stage, to remove remaining calcium, magnesium, and any other di/tri valent metals in the brine. The impurity free brine is then sent to carbonation reactors. Here the addition of a soda ash solution and high temperatures result in lithium carbonate precipitating (technical grade), which is filtered on a belt filter, repulped and centrifuged. This can be directly dried and sold as technical grade. In order to obtain battery grade, the pulp is transported to another purification stage. The mother liquor generated from the belt filter is recycled to the ponds in order to recover the remaining lithium.

The purification stage consists of the generation of lithium bicarbonate through the reaction in agitated reactors of the solid lithium carbonate and gaseous CO_2 at low temperature. The lithium bicarbonate is much more soluble in water than lithium carbonate, allowing the separation from any residual soluble and insoluble impurities. With the use of an IX stage utilizing a specific selective resin, any boron and/or di/tri valent metals left in the solution are removed, and a highly pure bicarbonate solution is fed to a desorption stage. With the increase of temperature (up to 80°C) the CO_2 is desorbed, and solid lithium carbonate is re-precipitated. The slurry is centrifuged, dried, reduced in size (milled) and packaged in maxibags, to be finally transported to clients.

SITE LAYOUT & INFRASTRUCTURE

Physical areas included on the Project are shown in Figure 6 and Figure 7:

- NW and SE evaporation ponds and Liming Plant
- NW brine wellfield (Archibarca location)
- SW brine wellfield
- Alluvial production wells are located southeast of the Project area
- Liming plant ponds (decantation ponds)
- Industrial facilities area
- Harvested salt stockpile areas

The brine production wellfields will be located on two sectors of the Salar de Cauchari, one in the Archibarca area, near and among the initial evaporation ponds and another located south-east of this location. Initially, and up to year four (4) of the operation, the evaporation ponds will cover an area of approximately 10.5 million m^2. The brine lithium concentration decreases from 580 mg/l to 545 mg/l by Year 5 of the operation, and an increase to 11.3 million m^2 in pond area is required. By Year 10, the average brine lithium concentration decreases to 491 mg/l and requires the final increase of the evaporation ponds area to 12.2 million m^2.

Figure 6: Main physical areas and roads of the Project
https://www.globenewswire.com/NewsRoom/AttachmentNg/7bb92b14-e9f5-46e9-963a-f991078bd9fd

Temporary and permanent facilities are contemplated in the Project for the industrial area. The industrial facilities area for the Project will be located in the NW Sector of the Project on the Archibarca fan, and will include:

- Lithium carbonate plant
- Auxiliary services:
    - Reagent storage
    - Plant supply storage (gas, CO_2, compressed air, fuel)
    - Water Treatment Plant
    - Access control area
    - Electrical rooms (Electrical generators)
    - Boiler room
- Warehouses
- Truck workshop
- Administrative building and laboratory
- Workers' camp
- Temporary contractors' installations

Figure 7: Detail of main installations for the Project
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FINANCIAL PERFORMANCE

Development Capital and Operating Costs

Project CAPEX for 25,000 tpa lithium carbonate is estimated to be US$659 million. Further details are summarised in Table 4.

Costs estimates and economic assessments for the 25,000 tpa processing facility are at a AACE Class 4 +30% / - 20% level with no escalation of costs.

The Cauchari Project is at Pre-Feasibility Study phase.

The capital cost estimate was prepared by Worley Chile S.A. and Worley Argentina S.A. (collectively, Worley) in collaboration with Allkem. The estimate includes capital cost estimation data developed and provided by Worley, Allkem, and current estimates.

The capital cost was broken into direct and indirect costs.

Table 4: Summary of Development Capital Cost

Development Capital Cost	Units	Total
Direct Cost		
Brine Extraction Wells	*US$M*	16
Evaporation Ponds	*US$M*	146
Brine Treatment Plant	*US$M*	18
Lithium Carbonate Plant	*US$M*	105
General Services	*US$M*	110
Infrastructure	*US$M*	40
Additional Camps	*US$M*	15
Total Direct CAPEX	*US$M*	450
EPCM + Owners Cost + Others + Contingency	*US$M*	209
TOTAL CAPEX	*US$M*	659

Operating cost is estimated to be US$4,081 per tonne LCE. No inflation or escalation provisions were included. Subject to the exceptions and exclusions set forth in this Report, the aggregate annual Operating Cost for Cauchari is summarised in Table 5. Reagents represent the largest operating cost category, then labour followed by operations and maintenance.

Table 5: Summary of Operating Cost

Operating Cost	Units	Total
Reagents	*US$/t LCE*	2,158
Labour	*US$/t LCE*	674
Energy	*US$/t LCE*	235
General and Administration	*US$/t LCE*	596
Consumables and Materials	*US$/t LCE*	243
Transport and Port	*US$/t LCE*	175
TOTAL OPERATING COST	*US$/ t LCE*	4,081
Minor discrepancies may occur due to rounding		

Lithium carbonate price forecast

Lithium has diverse applications including ceramic glazes, enamels, lubricating greases, and as a catalyst.

Demand in traditional sectors grew by approximately 4% CAGR from 2020 to 2022. Dominating lithium usage is in rechargeable batteries, which accounted for 80% in 2022, with 58% attributed to automotive applications. Industry consultant, Wood Mackenzie ("Woodmac") estimates growth in the lithium market of 11% CAGR between 2023-2033 for total lithium demand, 13% for automotive, and 7% for other applications.

Historical underinvestment and strong EV demand have created a supply deficit, influencing prices and investment in additional supply. Market balance remains uncertain due to project delays and cost overruns. The market is forecast to be in deficit in 2024, have a fragile surplus in 2025, and a sustained deficit from 2033.

Prices have fluctuated in 2022-2023, with factors like plateauing EV sales, Chinese production slowdown, and supply chain destocking influencing trends. Woodmac notes that battery grade carbonate prices are linked to demand growth for LFP cathode batteries and are expected to decline but rebound by 2031. Lithium Hydroxide's growth supports a strong demand outlook, with long-term prices between US$25,000 and US$35,000 per ton (real US$ 2023 terms).

PROJECT ECONOMICS

An economic analysis was developed using the discounted cash flow method and was based on the data and assumptions for capital and operating costs detailed in this report for brine extraction, processing and associated infrastructure. The evaluation was undertaken on a 100% equity basis.

The basis of forecast lithium carbonate pricing was provided by Woodmac for the period 2023 to 2035, with a longer-term price of US$28,000/t and US$26,000/t used for battery grade and technical grade lithium carbonate from 2035 onwards.

The current Jujuy Provincial Mining royalty is limited to 3% of the mine head value of the extracted ore, calculated as the sales price less direct cash costs related to exploitation and excluding fixed asset depreciation.

The key assumptions and results of the economic evaluation are displayed in Tables 6 below.

Table 6: Key assumptions utilised in the project economics

Assumption	Units	Stage 1
Project Life Estimate	*Years*	30
Discount Rate (real)	*%*	10
Provincial Royalties [1,2]	*% of LOM net revenue*	3.0
Corporate Tax[2]	*%*	35
Annual Production[3]	*tonnes LCE*	25,000
CAPEX	*US$M*	659
Operating Cost	*US$/tonne LCE*	4,081
Average Selling Price[4]	*FOB US$/tonne LCE*	27,066

[1] Provincial royalty agreement at 3.0%, export duties, incentives and other taxes are not shown.
[2] There is a risk that the Argentina Government may, from time to time, adjust corporate tax rates, export duties and incentives that could impact the Project economics.
[3] Based on 100% battery grade lithium carbonate production.
[4] Based on price forecast provided from Wood Mackenzie and targeted production grades stated in Footnote 3 above.

The study update demonstrates strong financial outcomes with a pre-tax NPV at a 10% discount rate of US$2.52 billion, this represents a ~200% increase from US$0.84 billion in the previous study.

Further project economics are summarised in Table 7.

Table 7: Summary of financials over a 30-year project life

Financial Summary	Units	Total
NPV @ 10% (Pre-tax)	*US$M*	2,523
NPV @ 10% (Post-tax)	*US$M*	1,366
IRR (Pre-tax)	*%*	32.6
IRR (Post-tax)	*%*	23.9
Payback Period[1]	*Years*	3.3
Development Capital Intensity	*US$ / tpa LC*	26,376

[1] Payback period is from date of first commercial production

Sensitivity Analysis

As displayed in Table 7 above, the Cauchari pre-feasibility study update demonstrates strong financial outcomes with a post-tax NPV at 10% discount rate of US$1,366 million and post-tax IRR of 23.9%. Figure 8 analyses the impact on post-tax NPV when pricing, operating cash costs and development CAPEX fluctuate between +/- 25 %.

Figure 8: NPV Sensitivity Analysis
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Funding
Funding is expected to be provided through one or more of the following:

- existing corporate cash;
- existing or new corporate debt or project finance facilities;
- Cashflow from operations

ENVIRONMENTAL AND SOCIAL IMPACTS

Environmental Liabilities

The Project tenements are not subject to any known environmental liabilities. There have been historical ulexite / borax mining activities adjacent to the Project in the north of the Salar. These mining operations are generally limited to within three metres of the surface, and it is assumed that these borax workings will naturally be reclaimed when mining is halted due to wet season inflows.

Base line studies

The Project has successfully completed various environmental studies required to support its exploration programs between 2011 and the present. The last Environmental Impact Assessment approval was in 2017 for the exploration stage.

In September 2019 the Project submitted an Environmental Baseline for the Exploitation stage which to date is under evaluation by the provincial mining authority.

All the Environmental Impact Assessments are submitted to the Provincial Mining Directorate and subject to a participatory evaluation and administrative process with provincial authorities (Indigenous People Secretariat, Water Resources Directorate, Environmental Ministry, Economy, and Production Ministry, among others) and communities of influence, until the final approval resolution is obtained.

In the case of Cauchari, the evaluation process is carried out with the participation and dialogue of the indigenous communities of Manantiales de Pastos Chicos, Olaroz Chico, Huancar, Termas de Tuzgle de Puesto Sey, Catua, Paso de Jama and Susques.

The Project has submitted an initial mine closure plan within the Exploitation Environmental Impact Assessment which is still under evaluation.

Permit Status

Exploration and mining activities are subject to regulatory approval following an environmental impact assessment ("EIA"), before initiating disturbance activities. The CPs understand that Allkem (previously Advantage Lithium) obtained all required approvals for the exploration drilling and testing programs in the Salar.

Allkem is currently in the process of renewing and maintaining required exploration-related permits while awaiting approval of exploitation permitting. Further permits will be required once exploitation is initialised.

There are no insurmountable risks identified at this time that could cause the project to not proceed into potential exploitation.

This release was authorised by Mr Martin Perez de Solay, CEO and Managing Director of Allkem Ltd..

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Subject to any continuing obligation under applicable law or relevant listing rules of the ASX, the Company disclaims any obligation or undertaking to disseminate any updates or revisions to any forward-looking statements in this Release to reflect any change in expectations in relation to any forward-looking statements or any change in events, conditions or circumstances on which any such statements are based. Nothing in this Release shall under any circumstances (including by reason of this Release remaining available and not being superseded or replaced by any other Release or publication with respect to the subject matter of this Release), create an implication that there has been no change in the affairs of the Company since the date of this Release.

Competent Person Statement
The information in this report that relates to Cauchari's Exploration Results, Mineral Resources and Ore Reserves is based on information compiled by Frederik Reidel, CPG, who is a Competent Person (#11454) and a Registered member of the American Institute of Professional Geologist (AIPG) and Competent Person (# 390) with the Chilean Mining Commission (CCCRRM) a 'Recognised Professional Organisation' (RPO) included in a list posted on the ASX website from time to time. Frederik Reidel, an Atacama Water SpA employee has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Frederik Reidel consents to the inclusion in this announcement of the matters based on their information in the form and context in which it appears.

The scientific and technical information contained in this announcement has been reviewed and approved by Frederik Reidel, CPG (Atacama Water SpA) as it relates to geology, modelling, and Mineral Resource and Ore Reserve estimates; Marek Dworzanowski, FSAIMM, FIMMM, Chartered Engineer with the Engineering Council of the United Kingdom registration (Metallurgical Engineer, Independent Consultant), as it relates to processing, facilities, infrastructure, project economics, capital and operating cost estimates. The scientific and technical information contained in this release will be supported by a technical report to be prepared in accordance with National Instrument 43-101 - Standards for Disclosure for Mineral Projects. The Technical Report will be filed within 45 days of this release and will be available for review under the Company's profile on SEDAR at www.sedar.com.

Not for release or distribution in the United States
This announcement has been prepared for publication in Australia and may not be released to U.S. wire services or distributed in the United States. This announcement does not constitute an offer to sell, or a solicitation of an offer to buy, securities in the United States or any other jurisdiction, and neither this announcement or anything attached to this announcement shall form the basis of any contract or commitment. Any securities described in this announcement have not been, and will not be, registered under the U.S. Securities Act of 1933 and may not be offered or sold in the United States except in transactions registered under the U.S. Securities Act of 1933 or exempt from, or not subject to, the registration of the U.S. Securities Act of 1933 and applicable U.S. state securities laws.

APPENDIX A

JORC Table 1 - Section 1 Sampling Techniques and Data related to Cauchari exploration drilling (Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation
Sampling techniques	● *Nature and quality of sampling (eg cut channels, random ch* ● *Include reference to measures taken to ensure sample repre* ● *Aspects of the determination of mineralisation that are Mate* ● *In cases where 'industry standard' work has been done this*
Drilling techniques	● *Drill type (eg core, reverse circulation, open-hole hammer, r*
Drill sample recovery	● *Method of recording and assessing core and chip sample re* ● *Measures taken to maximise sample recovery and ensure re* ● *Whether a relationship exists between sample recovery and*
Logging	● *Whether core and chip samples have been geologically and* ● *Whether logging is qualitative or quantitative in nature. Core* ● *The total length and percentage of the relevant intersections*
Sub-sampling techniques and sample preparation	● *If core, whether cut or sawn and whether quarter, half or all* ● *If non-core, whether riffled, tube sampled, rotary split, etc an* ● *For all sample types, the nature, quality and appropriateness* ● *Quality control procedures adopted for all sub-sampling stag* ● *Measures taken to ensure that the sampling is representativ* ● *Whether sample sizes are appropriate to the grain size of th*
Quality of assay data and laboratory tests	● *The nature, quality and appropriateness of the assaying and* ● *For geophysical tools, spectrometers, handheld XRF instrun* ● *Nature of quality control procedures adopted (eg standards,*
Verification of sampling and assaying	● *The verification of significant intersections by either indepen* ● *The use of twinned holes.* ● *Documentation of primary data, data entry procedures, data* ● *Discuss any adjustment to assay data.*
Location of data points	● *Accuracy and quality of surveys used to locate drill holes (co* ● *Specification of the grid system used.* ● *Quality and adequacy of topographic control.*

Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to est* • *Whether sample compositing has been applied.*
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sam* • *If the relationship between the drilling orientation and the ori*
Sample security	• *The measures taken to ensure sample security.*
Audits or reviews	• *The results of any audits or reviews of sampling techniques*

Section 2 - Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation
Mineral tenement and land tenure status	• *Type, reference name/number, location and ow* • *The security of the tenure held at the time of re*
Exploration done by other parties	• *Acknowledgment and appraisal of exploration b*
Geology	• *Deposit type, geological setting and style of mi*
Drill hole Information	• *A summary of all information material to the un* 1. *easting and northing of the drill hole colla* 2. *elevation or RL (Reduced Level - elevatio* 3. *dip and azimuth of the hole* 4. *down hole length and interception depth* 5. *hole length.* • *If the exclusion of this information is justified or*
Data aggregation methods	• *In reporting Exploration Results, weighting ave* • *Where aggregate intercepts incorporate short l* • *The assumptions used for any reporting of met*

Relationship between mineralisation widths and intercept lengths	● *These relationships are particularly important i* ● *If the geometry of the mineralisation with respe* ● *If it is not known and only the down hole length*
Diagrams	● *Appropriate maps and sections (with scales) a*
Balanced reporting	● *Where comprehensive reporting of all Explorat*
Other substantive exploration data	● *Other exploration data, if meaningful and mate*
Further work	● *The nature and scale of planned further work (* ● *Diagrams clearly highlighting the areas of poss*

Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation
Database integrity	● *Measures taken to ensure that data has not been corrupted by, for e* ● *Data validation procedures used.*
Site visits	● *Comment on any site visits undertaken by the Competent Person an* ● *If no site visits have been undertaken indicate why this is the case.*

Geological interpretation	● *Confidence in (or conversely, the uncertainty of) the geological inter* ● *Nature of the data used and of any assumptions made.* ● *The effect, if any, of alternative interpretations on Mineral Resource e* ● *The use of geology in guiding and controlling Mineral Resource estin* ● *The factors affecting continuity both of grade and geology.*
Dimensions	● *The extent and variability of the Mineral Resource expressed as leng*
Estimation and modelling techniques	● *The nature and appropriateness of the estimation technique(s) applie* ● *The availability of check estimates, previous estimates and/or mine p* ● *The assumptions made regarding recovery of by-products.* ● *Estimation of deleterious elements or other non-grade variables of ec* ● *In the case of block model interpolation, the block size in relation to t* ● *Any assumptions behind modelling of selective mining units.* ● *Any assumptions about correlation between variables.* ● *Description of how the geological interpretation was used to control t* ● *Discussion of basis for using or not using grade cutting or capping.* ● *The process of validation, the checking process used, the compariso*
Moisture	● *Whether the tonnages are estimated on a dry basis or with natural m*
Cut-off parameters	● *The basis of the adopted cut-off grade(s) or quality parameters appli*
Mining factors or assumptions	● *Assumptions made regarding possible mining methods, minimum mi*
Metallurgical factors or assumptions	● *The basis for assumptions or predictions regarding metallurgical ame*
Environmental factors or assumptions	● *Assumptions made regarding possible waste and process residue di*
Bulk density	● *Whether assumed or determined. If assumed, the basis for the assur* ● *The bulk density for bulk material must have been measured by meth* ● *Discuss assumptions for bulk density estimates used in the evaluatio*
Classification	● *The basis for the classification of the Mineral Resources into varying* ● *Whether appropriate account has been taken of all relevant factors (i* ● *Whether the result appropriately reflects the Competent Person's vie*
Audits or reviews	● *The results of any audits or reviews of Mineral Resource estimates.*

Discussion of relative accuracy/ confidence	● *Where appropriate a statement of the relative accuracy and confiden* ● *The statement should specify whether it relates to global or local esti* ● *These statements of relative accuracy and confidence of the estimat*

Section 4 Estimation and Reporting of Ore Reserves

Criteria	JORC Code explanation
Mineral Resource estimate for conversion to Ore Reserves	● *Description of the Mineral Resource estimate used as* ● *Clear statement as to whether the Mineral Resources*
Site visits	● *Comment on any site visits undertaken by the Compe* ● *If no site visits have been undertaken indicate why th*
Study status	● *The type and level of study undertaken to enable Min* ● *The Code requires that a study to at least Pre-Feasib*
Cut-off parameters	● *The basis of the cut-off grade(s) or quality parameter*
Mining factors or assumptions	● *The method and assumptions used as reported in the* ● *The choice, nature and appropriateness of the select* ● *The assumptions made regarding geotechnical paran* ● *The major assumptions made and Mineral Resource* ● *The mining dilution factors used.* ● *The mining recovery factors used.* ● *Any minimum mining widths used.* ● *The manner in which Inferred Mineral Resources are* ● *The infrastructure requirements of the selected minin*
Metallurgical factors or assumptions	● *The metallurgical process proposed and the appropri* ● *Whether the metallurgical process is well-tested tech* ● *The nature, amount and representativeness of metal* ● *Any assumptions or allowances made for deleterious* ● *The existence of any bulk sample or pilot scale test w* ● *For minerals that are defined by a specification, has t*
Environmental	● *The status of studies of potential environmental impa*

Infrastructure	● *The existence of appropriate infrastructure: availabilit*
Costs	● *The derivation of, or assumptions made, regarding pr* ● *The methodology used to estimate operating costs.* ● *Allowances made for the content of deleterious elem* ● *The derivation of assumptions made of metal or com* ● *The source of exchange rates used in the study.* ● *Derivation of transportation charges.* ● *The basis for forecasting or source of treatment and r* ● *The allowances made for royalties payable, both Gov*
Revenue factors	● *The derivation of, or assumptions made regarding rev* ● *The derivation of assumptions made of metal or com*
Market assessment	● *The demand, supply and stock situation for the partic* ● *A customer and competitor analysis along with the id* ● *Price and volume forecasts and the basis for these fo* ● *For industrial minerals the customer specification, tes*

Economic	*● The inputs to the economic analysis to produce the n* *● NPV ranges and sensitivity to variations in the signific*
Social	*● The status of agreements with key stakeholders and*
Other	*● To the extent relevant, the impact of the following on* *● Any identified material naturally occurring risks.* *● The status of material legal agreements and marketir* *● The status of governmental agreements and approva*
Classification	*● The basis for the classification of the Ore Reserves ir* *● Whether the result appropriately reflects the Compete* *● The proportion of Probable Ore Reserves that have b*
Audits or reviews	*● The results of any audits or reviews of Ore Reserve e*
Discussion of relative accuracy/ confidence	*● Where appropriate a statement of the relative accura* *● The statement should specify whether it relates to glo* *● Accuracy and confidence discussions should extend* *● It is recognised that this may not be possible or appro*